



STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources

BULLETIN No. 117-17

RITTER CANYON
AQUATIC RECREATION AREA

Recreation Development Plan

MAY 1974

NORMAN B. LIVERMORE, JR.
Secretary for Resources
The Resources Agency

RONALD REAGAN
Governor
State of California

JOHN R. TEERINK
Director
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State of California
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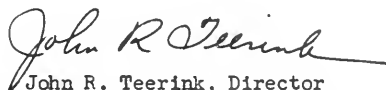
FOREWORD

The California Legislature, through the Davis-Dolwig Act (Water Code Sections 11900-11925), has established recreation and fish and wildlife habitat enhancement as among the purposes of the State Water Project. The facilities to achieve these purposes, the Legislature has emphasized, are not to be limited to those constructed at the reservoirs of the Project, but are also to be provided in the form of aquatic recreation areas and fishing access sites at appropriate points along the California Aqueduct.

Overall responsibility for acquiring the land and planning for these facilities has been given to the Department of Water Resources. It has obtained the services of the California Departments of Parks and Recreation and Fish and Game to assist in the planning.

This report presents a recreation plan for the Ritter Canyon Aquatic Recreation Area that is both feasible and consistent with other Project purposes. It is based on the report "Ritter Canyon Aquatic Recreation Area, Recreation Development Plan (Revised)", dated June 15, 1973, prepared by the Department of Parks and Recreation, and on "California Aqueduct, Ritter Canyon Aquatic Recreation Area - Fish and Wildlife Report", dated September 13, 1971, prepared by the Department of Fish and Game.

The capital improvements described in this report are to be developed by the Departments of Parks and Recreation, Fish and Game, and Water Resources. The County of Los Angeles, Department of Parks and Recreation, will operate and maintain the Recreation Area after it is constructed, subject to final approval of the County Board of Supervisors. The Department of Fish and Game will manage the fishery.



John R. Teerink, Director
Department of Water Resources
The Resources Agency
State of California
May 3, 1974

CONTENTS

	Page
FOREWORD	1
ABSTRACT	3
RECOMMENDATION	3
INTRODUCTION	4
RECREATION DEMAND	4
THE RECREATION PLAN	5
PROJECTION OF RECREATION USE	9
LAND ACQUISITION AND SCHEDULING	10
OPERATION PLAN	10
BENEFITS AND COSTS	10

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COORDINATION

Coordination was maintained with the agencies shown below throughout the preparation of the plan:

State of California
Department of Parks and Recreation
Department of Fish and Game
Department of Transportation, District 07
Department of Health
Regional Water Quality Control Board,
Lahontan Region
Wildlife Conservation Board

County of Los Angeles
Board of Supervisors
Department of Parks and Recreation
Regional Planning Commission
Department of Health
Department of Forester and Fire Warden
Road Department

ABSTRACT

This bulletin presents a plan for recreation facilities at the Ritter Canyon Aquatic Recreation Area along the California Aqueduct approximately 4 miles west of Palmdale in north central Los Angeles County.

The plan calls for development of facilities for a 4.5-acre pond and 185 acres of surrounding land to provide water-associated recreation opportunities for swimming, picnicking, camping, nonpower boating, and fishing, plus a staging and camp area for the California Aqueduct Bikeway. The State Department of Parks and Recreation will develop the recreation facilities, and the Department of Fish and Game will stock the pond. The California Department of Parks and Recreation has arranged for the Los Angeles County Department of Parks and Recreation to operate and maintain the Recreation Area. Facilities described will cost an estimated \$2,363,000, including the cost of the pond and the land. The land will be purchased by the Department of Water Resources at an estimated cost of \$450,000. Recreation use is expected to reach design capacity in 1979 with approximately 188,000 recreation-days annually.

RECOMMENDATION

In accordance with the Davis-Dolwig Act, the Department of Water Resources recommends that the Legislature appropriate funds to develop the improvements described in this report.

INTRODUCTION

The Ritter Canyon Aquatic Recreation Area is a 190-acre development proposed as a part of the recreation and fish and wildlife habitat enhancement program of the State Water Project.

The site is in the Antelope Valley of Los Angeles County, 4 miles west of the City of Palmdale, 10 miles southwest of the City of Lancaster, and 55 miles northeast of the City of Los Angeles. It lies in a small canyon just to the north of where Elizabeth Lake Road passes over the California Aqueduct. This road connects to ramps of the State Highway 14 Freeway and provides access to the site. The Recreation

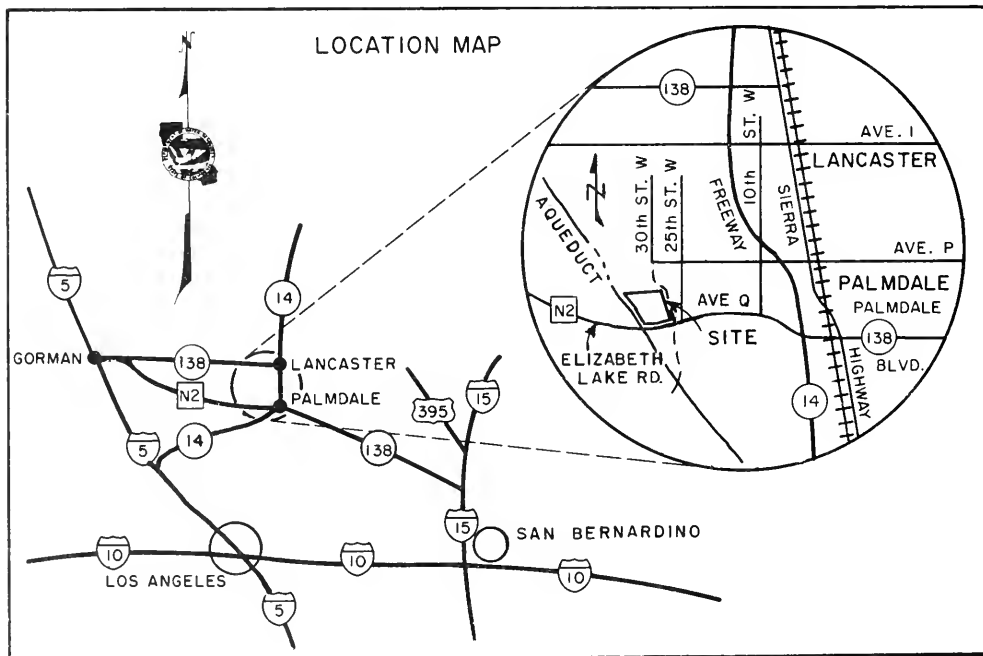
Area will be served by a network of county roads and state highways (Figure 1).

The climate at the site is typical of the high desert. The summers are dry, with daytime temperatures averaging in the upper 90's (Fahrenheit). During the winter months, winds from the west blow frequently, rainfall averages less than 10 inches, and an average of 3 inches of snow falls. Sunshine and clear skies prevail most of the year, providing a long recreation season.

RECREATION DEMAND

The 1973 resident population of north central Los Angeles County is

Figure 1



100,000. A large percentage of these live within 10 miles of the Recreation Area. The Los Angeles Metropolitan Area with its projected 1980 population of 12 million is only 55 miles southwest of the site. The site is readily accessible by newly constructed freeways and highways, which expand the potential of the Area to recreationists living within a 2-hour driving distance.

The increasing travel cost and reduced freeway speeds are expected to increase demand for recreation areas close to the large Southern California population centers. The Ritter Canyon Recreation Area is considered to be one of these.

The demand for swimming facilities in the Palmdale-Lancaster area and the surrounding region is much greater than the capacity of available developments.

Present local (20-mile radius) water-associated recreation facilities are Elizabeth Lake, Hughes Lake, Manzanita Hills Park, Lake Palmdale, Apollo County Park, and Little Rock Reservoir. These are publicly and privately developed and operated lakes and reservoirs. A combined annual recreation use of these areas has been estimated at about 500,000 visitor-days with many persons turned away.

THE RECREATION PLAN

The plan as discussed here and shown on Figure 2 represents a proposed recreation area that will be designed and operated with a regional park emphasis. The facilities will offer water-associated recreation for small nonpower boats, fishing, and swimming. It will provide turfed areas and facilities for picnicking, camping, hiking, and bicycle staging.

The recreation features will be constructed at two intervals. The initial facilities are scheduled for completion late in 1976. The remaining facilities will be added as

needed to meet increasing recreation demands and as funds become available.

Pond and Swimming Lagoon

A 4.5-acre pond with a water capacity of 42 acre-feet will be created by constructing a 25-foot-high earthfill dam across the mouth of Ritter Canyon. The pond will have a normal water surface elevation of about 2,810 feet above sea level. The spillway, with a crest elevation of about 2,812 feet and a width of 25 feet, is designed to discharge 1,100 cubic feet per second of floodflow over an ungated weir.

The pond will accommodate about 25 nonpowered boats. These will be operator-furnished and will be restricted to small sail, row, and canoe-type boats. This boating capability will provide facilities for boat handling and water safety training.

An earth berm will be constructed to separate a one-half-acre swimming lagoon from the main pond. The berm will serve to prevent the filtered and treated water from mingling with that in the pond but treated water could be passed into the pond as required to maintain water level and quality. The lagoon will have a sand beach approximately 400 feet long to be sloped on a gradient of 15:1. Restrooms, showers, and dressing rooms will be provided adjacent to the swimming beach.

Water for the initial filling and replenishment of the pond and lagoon will come by pipeline from the California Aqueduct. Water for the swimming lagoon will pass through a purification system. Water treatment facilities meeting public health standards will be installed.

Picnic Facilities

A total of 60 family picnic units will be provided in the initial development

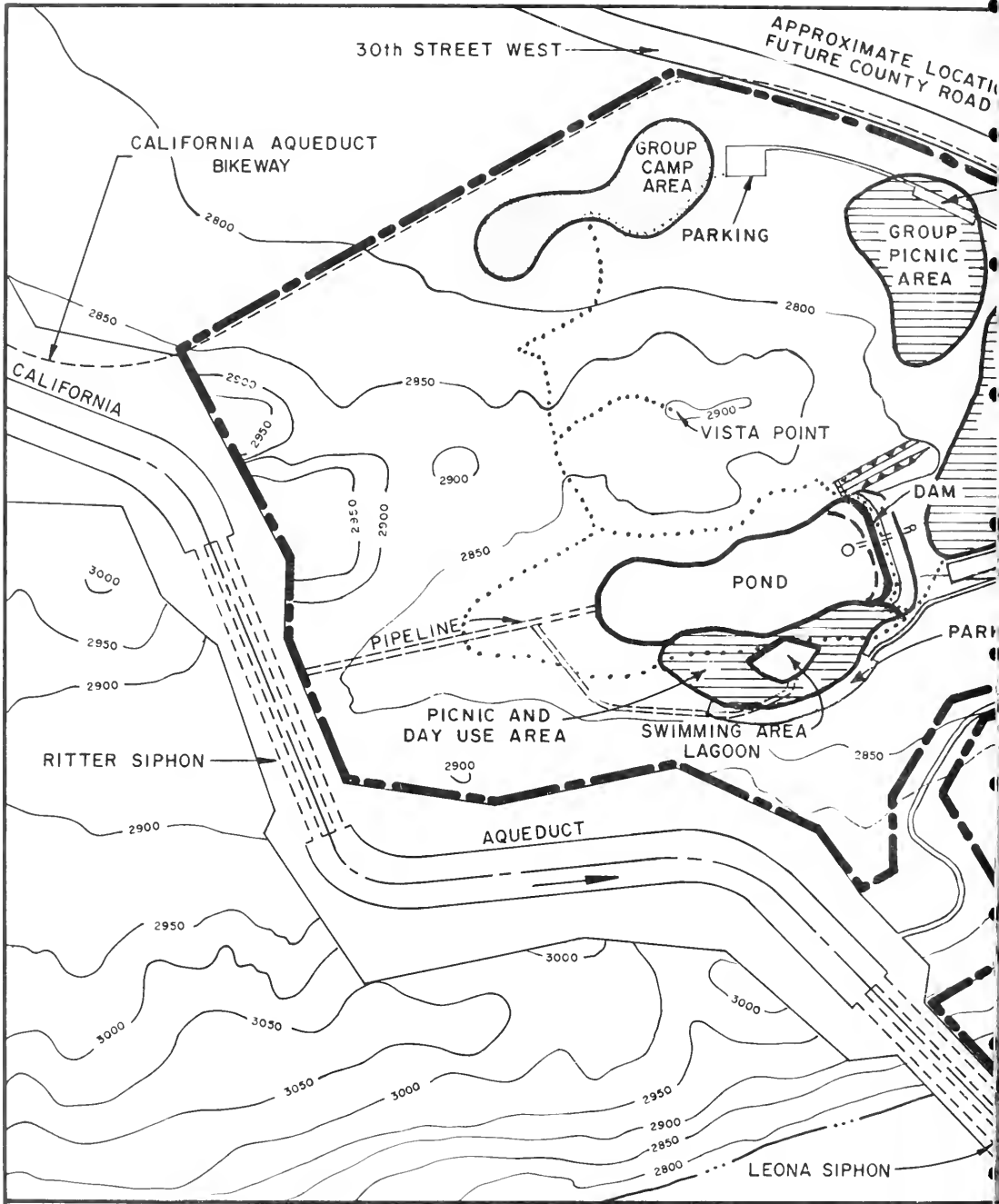


FIGURE 2-RITTER CANYON AQUATIC

OF

TECHNICAL
AND
USE
AREA

G

2950

PARKING



ENTRANCE STATION

ADMINISTRATION SERVICE
AREA

ENTRANCE

EXISTING
SERVICE ROAD

AMARGOSA

SERVICE ROAD
RIGHT-OF-WAY

RECREATION
ACCESS ROAD

BICYCLE STAGING & CAMP AREA

ELIZABETH

25th STREET WEST

CREEK

ROAD

LAKE

LEGEND

- RECREATION AREA
BOUNDARY AND
ACQUISITION LINE
- CALIFORNIA AQUEDUCT
BIKEWAY
- TRAIL AND SERVICE
ACCESS

SCALE OF FEET



2750

2800

2800

2850

2900

2850

2800

2800

2850

2900

2950

2900

2850

and 80 will be added later. This will make a total of 140 family picnic units for day use. An informal turfed play area, and a children's play area will be close to the picnic area. Individual units will contain cooking stoves. These will be available to all motorists who wish to stop, as well as to fishermen, swimmers, bicyclists, and hikers.

The group picnic area will be developed in the second phase to accommodate 200 persons. The area will be located north of the main picnic and swimming areas. It will be easily accessible for large club or travel group outings.

Parking for 100 cars will be provided in the initial development and space for 300 additional cars will be added later. The parking will be placed convenient to the picnic units. Additional parking will be located in camping and other areas as required.

The initial development will include landscaping near the swimming pond for picnicking use. Approximately 25 shade ramadas will be an integral part of the initial development. The remaining landscaping will be added as funds become available. Landscaping with turf and tree plantings will make the area an attractive, pleasing area. Water and sanitary facilities will be conveniently placed.

Camping Facilities

Overnight camping facilities are scheduled as part of the second phase development. They will consist of a group camping area located on the north side of the project lands (Figure 2). It will contain 2 group-camp units that will accommodate 50 campers each. About 25 family camping units will also be provided at the group area. There will be a comfort station building offering weather protection and rest rooms.

About 25 camping sites for bicyclists will be provided at the south bicycle

staging and camping area. Tent camping provisions will also be provided.

Hiking trails will connect the camping areas to all other park facilities.

California Aqueduct Bikeway

The California Aqueduct Bikeway, constructed adjacent to the California Aqueduct as it passes through the Antelope Valley, has been opened to hikers and bicycle riders. The Recreation Area makes contact with this Bikeway and offers facilities for wayside stops, rest areas, and overnight stops. Bicycle parking stands and staging areas are planned.

Other Developments

Ritter Canyon contains various rock outcroppings and formations and the San Andreas fault, which will warrant interpretation by either conducted or self-guided tours.

Initial access to the Recreation Area will be by the existing Department of Water Resources service road which is off the 25th Street West county road. Future access to the Recreation Area will be provided by 30th Street West, which will extend along the eastern edge of the Recreation Area from Elizabeth Lake Road.

The County of Los Angeles plans to construct a bridge over Amargosa Creek and make roadway improvements along this 30th Street West route.

Water for domestic use may be obtained from wells to be developed in the area, from Los Angeles County Water Works District No. 34, or by treatment of waters from the Aqueduct.

The required sanitary systems using septic tanks and leach fields will be constructed at the site, meeting Los Angeles County Health Department and

the Regional Water Quality Control Board standards.

Fish and Wildlife Habitat Development

The inlets to Ritter and Leona Siphons on the Aqueduct, located adjacent to the west side of the Recreation Area, make fishing in their immediate vicinity hazardous. Accordingly, Aqueduct fishing in the siphon area will be prohibited. However, the Wildlife Conservation Board plans to develop safe Aqueduct fishing areas both upstream and downstream from the siphons. These open fishing areas can be reached from the Recreation Area by hiking or bicycle trails or by road.

The pond fishery will be started with the initial planting of warmwater game fish, such as bluegill, catfish, and largemouth bass by the Department of Fish and Game. This self-sustaining fishery should provide approximately 4,000 angler-days of use annually.

The pond could support a winter catchable trout program. It is anticipated that the operating agency (County of Los Angeles, Department of Parks and Recreation) will purchase trout for release in the pond. Anglers would pay a daily fee, which would allow them to catch and keep a specified limit.

The Recreation Area features will be located both in a small canyon and along the eastern edge of Ritter Ridge, which is a location with natural appeal.

The terrain has a mean elevation above sea level of about 2,840 feet. The north-facing slopes of the canyon are covered with California juniper and Joshua trees. The south-facing slopes support annual grasses and low-growing shrubs. Flowers bloom profusely during the spring after the winter rains. Buckwheat, goldenhead, yucca, and various sages are among the plants native to the area.

Prevalent wildlife species in the vicinity are resident birds, such as the California valley quail, loggerhead shrike, brown towhee, and scrub jay, and animals such as coyotes, badgers, rabbits, hares, and rodents. Migrant birds such as cedar waxwings, Audubons warbler, and Scotts oriole pass through the area. The Department of Fish and Game has recommended that existing native vegetation be preserved and that landscaping make use of native species that are attractive to wildlife for food and cover.

Walking trails will connect parking lots to recreation features and to points of interest in the natural areas. They will permit public access to photograph wildlife and the high desert vegetation.

PROJECTION OF RECREATION USE

For predicting recreation demand and use, dependable indicators have been used rather than records from comparable areas, because no comparable areas are found in Southern California.

The Area is planned to be operational in the late fall of 1976 as initial construction is completed. In this desert area of serious shortages of outdoor recreation facilities, news of its opening will spread rapidly.

Good fishing in the Aqueduct and pond will attract anglers from a wide area. Swimming, boating, camping, hiking, and picnicking will provide out-of-doors activities for the entire family.

The demand for all these outdoor recreation uses will reach design capacity of 188,000 recreation-days annually in the third full year of operation. A sustained level of use will depend upon early completion of all park facilities, including the tree planting program and the successful establishment of turfed areas throughout the Recreation Area. Table 1 indicates predicted use of

TABLE 1	
RITTER CANYON AQUATIC RECREATION AREA ANNUAL RECREATION USE In Recreation Days	
Year	Use
1976	47,000
1977	94,000
1978	141,000
1979-2026	188,000

the facilities through a 50-year period of analysis.

LAND ACQUISITION AND SCHEDULING

The recreation plan for this Area reflects the probable development based on information prevailing in March 1974. Figure 2 of this report, taken from a drawing provided by the State Department of Parks and Recreation, shows the general layout of facilities. The plan requires 190 acres of privately owned land, which comprise 3 parcels. There are no buildings or improvements on the required lands. In March 1974, these lands were estimated to have a value of \$450,000. The estimate was based on current prices paid for comparable parcels in the area. The Department of Water Resources will acquire the required land using State Water Project funds, which will be subsequently reimbursed from State General funds under provisions of the Davis-Dolwig Act.

Construction of the initial facilities is scheduled to start in late 1975 with expected operation of the area in 1976. Further development of the project to completion will continue as funds are made available. Filling of the pond and stocking it with fish will be made in coordination with the initial facilities. Irrigation systems for planted turf and trees would be

activated as part of the construction contract.

OPERATION PLAN

The California Department of Parks and Recreation plans to develop the Recreation Area, but has arranged for the Los Angeles County Department of Parks and Recreation to operate and maintain it. Therefore, planning for the development of the facilities has been coordinated with that agency. Operation by the County of Los Angeles is considered to be in the best public interest, and the County Board of Supervisors has endorsed this concept. The Recreation Area is expected to be in operation year around.

The Los Angeles County Department of Parks and Recreation is expected to charge user fees that do not exceed those charged for use of the State Park System.

Fire protection would be provided by the County, which maintains 12 fire stations in the Antelope Valley; the nearest is in Palmdale.

BENEFITS AND COSTS

A method for establishing benefits for general recreation days, adopted by the Departments of Water Resources and Parks and Recreation through a "Statement of Guidelines" provides criteria for evaluating general recreation by two factors: (1) the variety and quality of recreation and (2) the aesthetic qualities of the site. Using these criteria, the unit benefit for recreation at Ritter Canyon Aquatic Recreation Area was established at \$1.80 per recreation-day.

The unit benefit value for warmwater fishing was established at \$1.80 per angler-day under procedures adopted by the Departments of Fish and Game and Water Resources.

The capital cost of all facilities is estimated to be \$2,363,000 (Table 2). This includes the initial investment for the warmwater fishery and land costs.

A unit value of 40 cents per recreation-day was used to determine annual recreation user operation, maintenance, and water treatment costs. Annual replacement costs were set at 3.5 percent of the capital expenditures for onshore facilities. The unit cost of Aqueduct water available at the site is estimated to be \$20 per acre-foot. This cost represents the variable component of the transportation cost

of water delivered from the Delta. The total equivalent annual operation and maintenance, replacement, and water delivery costs are estimated to be \$120,000.

All identifiable recreation and fish and wildlife habitat enhancement benefits and costs have been converted to the present worth value in 1976. Based on a 50-year period of analysis at 5 percent interest rate, the present worth of all future benefits is \$5,433,000 and of costs is \$4,500,000. The resulting benefit-cost ratio is 1.2 to 1.

TABLE 2

ESTIMATED CAPITAL COSTS OF RECREATION AND FISH AND WILDLIFE
HABITAT ENHANCEMENT FACILITIES

<u>Development features^{2/}</u>	<u>Initial development cost</u>	<u>Ultimate development cost</u>
1. Utilities, including water and sanitary facilities, electric and telephone line <u>1/</u>	\$ 313,000	\$ 434,400
2. Site development, including landscaping, fencing, roads, parking, family and group picnic units, family, group, and enroute bicycle camping units <u>1/</u>	239,300	578,400
3. Buildings, including entrance station, comfort stations, and service building <u>1/</u>	107,600	261,900
4. Park maintenance equipment	37,900	37,900
5. Warmwater fishery development	400	400
6. Dam appurtenant facilities, and swimming lagoon excavation <u>1/</u>	438,100	438,100
7. Beach, lagoon lining, and mechanical equipment <u>1/</u>	<u>161,900</u>	<u>161,900</u>
Subtotal	\$1,298,200	\$1,913,000
8. Land costs ^{3/}	<u>450,000</u>	<u>450,000</u>
Total	\$1,748,200	\$2,363,000

^{1/}Includes engineering and contingency costs

^{2/}\$1,298,200 will be provided by the Recreation and Fish and Wildlife Enhancement Fund. The Department of Water Resources will fund the dam and appurtenances to the extent of its allocation available from the Federal Land and Water Conservation Fund. Additional funding will be provided from sources undetermined at this time to bring the project up to ultimate development.

^{3/}Land will be purchased by the Department of Water Resources using State Water Project funds in accordance with the Davis-Dolwig Act.

